



## Access to Space

### Lower Cost is Goal of Bantam Technology

NASA is seeking ideas for a test vehicle to demonstrate new technologies that would dramatically reduce the recurring cost of launching small payloads into low-Earth orbit.

The Marshall Center has issued a NASA Research Announcement soliciting proposals to research and demonstrate technologies which will enable a new low-cost launch system.

This is the second phase of NASA's Bantam System Technology Project, which is part of the Low Cost

Boost Technology effort. Low Cost Boost Technology is one segment of the Advanced Space Transportation Program — an initiative to develop technologies for space transportation needs for the next 25 years.

One of the objectives of the Low Cost Boost Technology effort is to significantly lower the cost of access to

space for small payloads.

The first phase of the Bantam project solicited ideas for low-cost component technologies. These experiments



*The Marshall Center is soliciting proposals to research and demonstrate technologies which would dramatically reduce the recurring cost of launching small payloads into low-Earth orbit. Shown here is a possible concept for Low Cost Boost Technology.*

focused on adapting common manufacturing techniques and existing commercial, off-the-shelf hardware to the aerospace applications.

The goal of the second phase is to develop technologies for a launch system integrating new technologies and the technologies developed in phase one.

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## U.S. Marks One Year Of Continuous Presence in Space

Saturday, March 22, will be the one-year anniversary of a continuous U.S. presence in space, which began with the launch of astronaut Shannon Lucid aboard Space Shuttle Atlantis on the STS-76 mission to the Mir space station.

Since Lucid arrived on Mir, astronauts John Blaha and Jerry Linenger have followed in her footsteps, conducting continuous scientific experiments aboard the Russian complex as a precursor to the development and occupancy of the International Space Station.

Linenger will remain aboard Mir until mid-May, when he will be replaced by astronaut Mike Foale, who, in turn, will be replaced in September by astronaut Wendy Lawrence. The final U.S. astronaut scheduled for a tour of duty on the Mir is David Wolf in early 1998.

## Six at Marshall Get NASA Fellowships

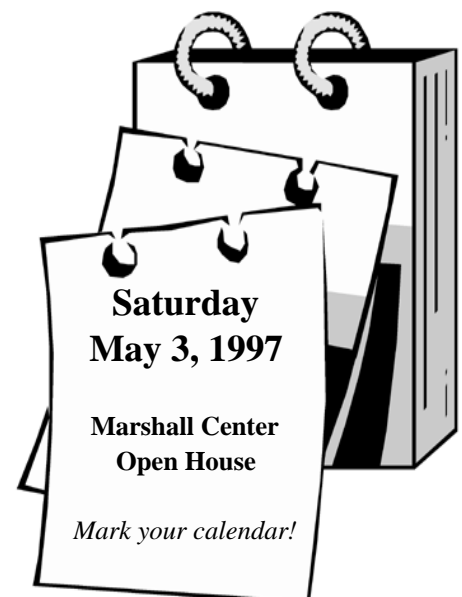
Six Marshall employees are among 27 Agency-wide selections for the 1997 NASA Fellowship Programs.

Marshall employees selected are Dr. Helen McConnaughey/EP51, Carnegie-Mellon University Senior Executive Seminar; Garry Lyles/DA01, Harvard University Senior Executive Fellows; Dr. Rebecca McCaleb/AE01, Harvard University Senior Managers in Govern-

ment; Steven Gentz/EH22, Massachusetts Institute of Technology Advanced Engineering Study Program; Amanda Harris/CR01, Penn State University Program for Strategic Leadership; and Rose Allen/FA22, Simmons College, Graduate School of Management Program for Developing Managers.

Candidates are selected based on their

*continued on page 2*



## Director's Fund Encourages Ideas

The Center Director's Discretionary Fund (CDDF) Program is an activity which encourages and supports innovative ideas in research and development performed by Marshall engineers and scientists. The CDDF Program was established in 1978 with an annual budget of \$250,000, and is open to all Marshall employees.

"The program has grown throughout the years, both in terms of interest at the Center and in the budget, with the current CDDF annual budget in excess of \$2 million," said Alan Adams, program coordinator. "The Marshall Center CDDF Program is administered through the Program Development Office."

For the fiscal year 1997 CDDF Program, Marshall engineers and scientists submitted proposals and 25 new projects were selected.

"The time and effort expended on research for these projects will result in a valuable contribution to Marshall's mission," said Adams. "The program has made significant contributions to the Marshall mission."

"Many of the advanced propulsion activities at Marshall started out as CDDF projects such as solar thermal propulsion, magnetohydrodynamic and nuclear fusion propulsion concepts. The CDDF program has also contributed in the areas of optics and microgravity," he added.

The principal investigators selected for the 1997 projects are: Jonathan Campbell, Helen Cole, John Cowan, James Derrickson, Charles Dischinger, Bill Emrich, Don Frazier, Dick Holmes, Ted Kublin, Jonathan Lee, Brian Mitchell, Robert Newton, Ben Goldberg, Greg Olsen, Alan Patterson, Benjamin Penn, Michael Polites, Greg Schunck, Andrew Smith, Cydale Smith, David Smith, Tom Sutherland, Huu Trinh, and Marcus Vlasse.

Questions regarding the program can be directed to Adams at 4-3607.

## Washington Update Luncheon is Next Week

The Huntsville/Madison County Chamber of Commerce and the Business Council of Alabama are inviting Marshall Center employees to a Washington Update Luncheon with U. S. Senator Jeff Sessions of Alabama. Tickets for the event at noon on March 26 in the North Hall of the Von Braun Center are \$20.

Sessions, who will be giving his first "Update," holds committee assignments that include Committee on the Judiciary;

Chairman of the subcommittee on Youth Violence; and member, subcommittee on Administrative Oversight and the Courts. He also serves on the Committee on Environment and Public Works; Select Ethics Committee and the Congressional Joint Economic Committee.

Those who are interested in attending should contact Mary Rutledge of the Public Affairs Office at 4-0038 by March 21.

## 1996 Retirees to Be Honored During Banquet

The 30 employees who retired from the Marshall Center during 1996 will be honored during the 11th Annual Marshall Center Retirees' Dinner on March 25 at the Von Braun Center. The employees are:

Blair, James C.	ED01
Bridwell, Porter	DA01
Busby, Carol D.	AI01

Cain, Sandra G.	EP01
Cooper, Robert L.	CR60
Evans, Phineas D.	EB52
Fountain, James A.	LA30
Goetz, Otto K.	SA21
Hall, Vanessa V.	GP10
Hallisey, Harold W.	BC01
Hilbert, Doris A.	JA12

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## NASA Fellowship Recipients

*from page 1*

work experience, education record, significant recognition, accomplishments and the candidate's objective for participation in the program, according to Vanessa Suggs, of Marshall's Personnel Office.

"The Executive Development Education Panel, which consists of representatives from the Centers, makes recommendation for selections to the Chairman of the Executive Resources Board, General Spence Armstrong," said Suggs. "Candidates are selected by the panel via a paper review or a paper review and interview."

NASA Headquarters received a total

of 64 nominations from field centers for the highly competitive, primarily academically-based programs which provide intensive studies of management and executive processes and technical disciplines.



Helen McConaughy



Garry Lyles



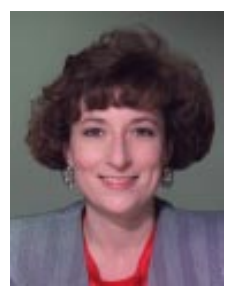
Steven Gentz



Rebecca McCaleb



Amanda Harris



Rose Allen



Rehearsal activity is in high gear for the 11th Annual Marshall Retiree Banquet to be held at the Von Braun Center on March 25. One enthusiastic group (top) say they "Ain't Gonna Bump No More" while another offering (bottom) will be a group who "Think" like Aretha Franklin.

## Order Earth Day T-Shirts Now

Marshall's annual celebration of Earth Day will be April 22. Earth Day is a day set aside to promote ecology, encourage respect for life on earth, and highlight the problems of pollution.

Earth Day T-shirts, with the logo on the front, can now be ordered from the NASA Exchange in Building 4752 until March 26. Margaret Saint of MSI has won \$50 for submitting the winning entry to this year's T-shirt logo contest. For more information contact Reggie Alexander at 4-9289.



## Celebration Planned

### Engine Support Passes 20 Years

To celebrate the 20th anniversary of the Hardware Simulation Laboratory and 20 years of support to the Space Shuttle Main Engine program, there will be an Open House and a Fish Fry/BBQ chicken cookout catered by Bubba's on April 4 at the Rustic Lodge on the banks of the Tennessee River. Dinner cost is \$10 per person. Deadline for reservations and purchase of meal tickets is March 28. Contact Janet Wilkes at 4-3891.

## Bantam Technology

from page 1

The resulting launch vehicle would be capable of placing a payload weighing approximately 350 pounds in orbit for \$1.5 million. This goal will be accomplished by research that identifies low-cost launch concepts and operations, economic analysis of these systems, and flight demonstrations.

"NASA intends to develop low-cost technologies to reduce the technical and economic risks associated with a commercial launch system designed for small payload service," according to Danny Davis, manager of the Low Cost Boost Technology Project. NASA seeks proposers to analyze the small payload market, develop a launch system concept for this market, develop a business plan for the commercial operation of this launch concept, and design and test a flight demonstrator to minimize commercial risks.

The launch system will focus on small research payloads that often are not funded due to the expense of space launch, Davis said. This activity could greatly increase the amount of research performed, especially considering the push to miniaturize spacecraft. Small payloads such as communication satellites and other commercial ventures in space also will benefit from inexpensive access to space.

Awards for the initial design and business plan development are scheduled for June of this year, and awards for the flight demonstrators are scheduled for February 1998. Anticipated funding for the awards in fiscal year 1997 is \$10.5 million. Fiscal years 1998 and 1999 funding is dependent upon the number and content of selected proposals and availability of funds.

Target date for a technology demonstration flight is September 1999.

## Retirement Banquet Honorees

from page 2

Houston, William C.	SA04
Jones, Charles O.	EJ32
Jones, Jess H.	ED32
Lynn, John C.	AA01
McCarty, John P.	EP01
McCord, Janet V.	EB42
Mobley, David H.	DA01
Morse, Robert J.	EL22
Mowery, David K.	ED13
Potter, Richard A.	FA65
Reynolds, John M.	EH12
Ross, Gordon M.	EE11
Ryan, Robert S.	ED01
Staples, Harry T.	FA62
Stocks, Charles D.	EH12
Tandberg-Hanssen, Einar A.	ES01
Taylor, Annie R.	AR01
Vibbart, Charles M.	EP52
Wood, Patrecia J.	FA21

## Employee Ads

### Miscellaneous

- ★ 1987 Dynatrak fish & ski boat, 17.5 ft., fully equipped \$6,500. 734-8649
- ★ Air Hockey Table, 6' x 3' \$100. 533-5362
- ★ Sofa, tan with touch of black, 7 ft. \$150. 852-3501
- ★ Golf clubs, Hogan radials 2-P with metal woods, left handed, bag included \$100. 830-0866
- ★ Dinette, square glass top, dark gray padded chairs and table base. Seats four. \$100. 851-6661
- ★ Walnut finish entertainment center \$75; La-z-boy rocker-recliner \$75; 2 speakers by Technics \$75; Kenmore microwave \$50. 881-4505
- ★ Compressor (outside unit) for 1-ton home A/C or heat pump system. \$100. 534-4968
- ★ Troy built tiller, used once, 6 hp Econo-Horse model, factory cost \$1,599; firm \$1,000 must sell. 536-5641
- ★ Full set of golf clubs with 3 woods, includes folding push cart. \$65. 837-9479
- ★ Desk, bookcase, credenza, file cabinet and exercise bike. 534-5345
- ★ Tractor, Bolens 18 hp Diesel 3 Cyl., 3pt. Hitch 48" belly mower 450 hours. \$3,600. 230-6382
- ★ Refrigerator frost-free, icemaker, Hotpoint. \$100 or best offer. 880-6792
- ★ Wood turning lathe, stand included, variable speed, one year old. \$100. 722-8221
- ★ Bach Stradivarius cornet \$175. 351-1889
- ★ Tennis racquets: Wilson Prostaff 5.5 \$55; Prince Precision \$35; Wimbledon \$30; Prokennex \$20; and Head \$10. 351-1889
- ★ Computer desk \$75; Dual cassette deck \$100; Coffee table \$10. 882-3326
- ★ Jetski x2 1989 stainless steel impeller improved engine single or double trailer \$1,450. 551-1007
- ★ Papa-san chair w/cushion \$20; toddler car seat \$15. 536-8951
- ★ Mercury 5000 outboard, 50 hp 4 cylinder, remote controls \$500 o.b.o. 722-7996
- ★ Power Rider exerciser \$100. 828-3633
- ★ Apple imagewriter 11 dot matrix printer with cables \$70. 881-4028
- ★ Cartop carrier, large plastic \$25; Equipment carrier for RV 4-inch bumper \$40. 534-2368
- ★ Harmon Kardon HK 3400 receiver \$150. 350-7461

### Vehicles

- ★ 1988 Honda Accord, 4-door, automatic, power windows and locks, 136K miles, \$4,000. 880-9025
- ★ 1993 Taurus GL, 55K miles, most options, white, \$9,525. NADA, asking \$8,400. 880-6792

- ★ 1990 Buick Riviera, ruby red, CD player, 79K miles \$7,500. 881-2601
- ★ Honda CBX motorcycle, 6-cyl., corbin, supertrapp, VDO gauges, sport-tourer. \$4,250. \$4,350. w/trailer. 837-6109
- ★ 1992 Astro van, 4wd, ABS, ext, lt, cruise, dual AC, towing, all power options. \$12,250. 837-6109
- ★ 1990 Jeep Cherokee Laredo 4 x 4, 76K miles. NADA \$11,075. asking \$10,500. o.b.o. 851-2929

### Wanted

- ★ Boy's bunk beds in good condition. 721-0078
- ★ Army camo field jackets, medium & large. 881-1718
- ★ Hogan radial 7 iron. 883-5114
- ★ APL interperter for DOS environment and/or books concerning APL. 233-5247

### Free

- ★ Cocker spaniel, blond male, 8 years old, neutered, shots current. 851-6661

### Found

- ★ Ladies watch, between bldg. 4201 & 4203, call 4-4758 to identify.
- ★ Big Beam emergency light, north side of bldg. 4705, call 4-4758 to identify.

## Center Announcements

- ☛ **Management Operations Office (MOO)** — MOO retirees will meet for breakfast/lunch on March 27 (4th Thursday each month) at the Cracker Barrel in Madison at 10 a.m. In addition to retirees, all present or former MOO employees are welcome. Call 539-0042 if there are any questions.
- ☛ **Association of Government Accountants (AGA)** — The North Alabama Chapter of AGA will hold its monthly luncheon meeting on March 20, 11:15 a.m. at the Marriott. Guest speaker Jimmie Brown who will speak on "White Collar Crime". For reservations call 876-2373.
- ☛ **MESA** — The Marshall Engineers & Scientists Association, IFPTE Local 27 will meet March 20 at 11:30 a.m. in the MESA Office, bldg. 4471, rm. C105. Refreshments will be served; call 4-7501 for more information.
- ☛ **Toastmasters** — Redstone Toastmasters International will meet every Tuesday at 6 p.m. in the Morrison's Cafeteria in Madison Square Mall. For more information call 461-0476.
- ☛ **Spring Dinner Dance** — Tickets for the April 12 Ballroom Dance are now on sale by the MARS Ballroom Dance Club. The semi-

formal event will be held in the VBC West Hall and will feature ballroom music by the Barry Orth Combo. Socializing will begin at 6:30 p.m., buffet dinner will be served at 7 p.m., followed by dancing from 8 to 11:30 p.m. Tickets are \$18 per person with a \$3 discount for members; they can be purchased from T. Landers (4-6818), P. Sage (4-5427), E. Ogozalek (837-1486), and B. Williams (4-3998). Reservations for a table of 8 can be made by calling Woody Bombara (650-0200).

☛ **March Bloodmobile Visit** — The American Red Cross will be at Building 4752 on March 21, 8 a.m. to 1:30 p.m., for the monthly Marshall Bloodmobile visit. The Red Cross will be giving donors free Tee shirts. By adhering to the following schedule, long waiting lines can be avoided: T - Z, 8 a.m.; Q-S, 8:30 a.m.; M-P, 9 a.m.; I-L, 9:30 a.m.; F - H, 10 a.m.; C-E, 10:30 a.m.; and A-B, 11 a.m.

☛ **Almanacs** — Please pick up your 1997 Federal Employee Almanacs at bldg. 4471, rm. C105 between 8:30 a.m. - 12:30 p.m. The cost is \$9 (\$8 for MESA members). Bookstore cost is \$11.95 plus tax. Call 4-7501 for more information.

## Job Opportunities

CPP 97-13-CP, AST Basic Properties of Materials, GS-1310-14, S&E, Space Sciences Lab, Microgravity Science & Applications Div., Biophysics Br. Closes April 14.

CPP 97-14-CP, AST, Basic Properties of Materials, GS-1310-15, S&E, Space Sciences Lab, Microgravity Science & Applications Div., Biophysics Br. Closes April 14.

CPP 97-15-CL, Technology Utilization Specialist, GS-301-11, Technology Transfer Office, Program Control & Management Support Office. Closes March 24.

CPP 97-10-JB, Secretary (OA), GS-318-7, Space Shuttle Projects Office, Solid Rocket Booster Project. Closes March 27.

CPP 97-12-JB, Program Analyst, GS-343-13, Human Resources & Admin Support Ofc., Management Operations Ofc., Resources & Operations Support Div. Closes March 20.

CPP 97-16-PL, Employee Relations Specialist, GS-230-9, promotion potential to GS-11, Human Resources & Administrative Support Ofc., Personnel Office, Training and Development Ofc. Closes March 20.

# MARSHALL STAR

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Editorial Assistant — Betty Humphery  
Director, Media Services — David B. Drachlis  
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